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**CHOI et al.**(10) **Pub. No.: US 2017/0102447 A1**(43) **Pub. Date: Apr. 13, 2017**(54) **COMMUNICATION DEVICE AND METHOD  
FOR CONTROLLING THE SAME****G01S 5/10** (2006.01)**H04W 56/00** (2006.01)(71) Applicant: **Samsung Electronics Co., Ltd.**,  
Gyeonggi-do (KR)(52) **U.S. Cl.****CPC** ..... **G01S 5/0252** (2013.01); **H04W 56/001**  
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Methods and apparatuses are provided for controlling a communication device. A first subframe is received from a serving cell and a plurality of subframes is received from a plurality of neighbor cells. A respective time difference of arrival (TDOA) is measured for each of the plurality of subframes based on a time of arrival (TOA) of the first subframe. At least one of the measured TDOAs is transmitted to a location server. The respective TDOAs are measured based on at least one of a cell-specific reference signal (CRS) and a synchronization signal in the plurality of subframes.

